

Vita – Gavin P Hayes

Current Occupation

Post-doc Researcher

[US Geological Survey National Earthquake Information Center](#)

(Contracted by [Synergetics, Inc.](#))

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Education

Aug 2002-'07 : **PhD, Penn State University.** Advisor: Kevin P. Furlong
5 semesters as a Teaching Assistant, 5 as a Research Assistant
1998-2002: **M.Geophys., Leeds University. Graduated with honors, first class**

Awards

Spring 2003 3rd place in Department of Geosciences student colloquium poster competition
Fall 2003 Department of Geosciences Griffith Scholarship Award.
Spring 2005 Department of Geosciences Scholten-Williams-Wright Scholarship Award
Spring 2006 ConocoPhillips Graduate Fellowship (proposal funded)
Spring 2006 Research Proposal funded, project collaboration, ExxonMobil URC (semester funding)
March 2007 Best Student Poster Award, EarthScope National Meeting
Spring 2007 1st place in Dept. Geosciences Student Colloquium Poster Competition
Spring 2007 2007/08 Peter Deines Lectureship Awardee (1st place in Dept. Geosciences Student Colloquium Oral Presentations, Post-Comprehensive Exam)

Publication Details

Publications: Papers and Theses

Hayes, G.P., 2007. Integrating seismological and tectonic studies to constrain lithospheric evolution at complex plate boundaries, PhD Thesis, Department of Geosciences, Penn State University.

Hayes, G.P., and Furlong, K.P., 2007, Abrupt Changes in Crustal Structure Beneath the Coast Ranges of Northern California – Developing New Techniques in Receiver Function Analysis, *Geophys. Jour. Int.*, **170**, 313-336.

Hayes, G.P., Johnson, C.B., and Furlong, K.P., 2006, Evidence for melt injection in the crust of Northern California?, *Ear. Plan. Sci. Lett.* **248**, 638–649.

Hayes, G.P., Stuart, G.W., and Reyners, M., 2004, The Waiouru, New Zealand, earthquake swarm – persistent mid crustal activity near an active volcano, *Geophys. Res. Lett.*, **31**,
doi:10.1029/2004GL020709.

Hayes, G.P., 2001, Relocating the hypocenters of an earthquake swarm near Waiouru, south east of Ruapehu, North Island, New Zealand, Msc Thesis, Department of Earth Sciences, The University of Leeds.

Submitted Papers

Hayes, G.P., and Wald, D.J., Developing framework to constrain the geometry of the seismic rupture plane in subduction zones *a priori* – a probabilistic approach, *submitted to Geophys. Jour. Int.*, May 2008.

Papers in Revision

Hayes, G.P., and Furlong, K.P., Local Velocity Ratio Calculation for California – A Simple Approach for Estimating Regional Vp/Vs, *submitted to Phys. Ear. Plan. Inter.*, 2007.

Hayes, G.P., Furlong, K.P., and Ammon, C.J., Intraplate Deformation Adjacent to the Macquarie Ridge South of New Zealand - The Tectonic Evolution of a Complex Plate Boundary, *submitted to Tectonophysics*, Oct 2007.

Relevant Work Experience

August 2002 – Present	Teaching Assistant, Department of Geosciences, Penn State University, USA
Teaching Assistant	Fall 2002, Spring 2003, Spring 2004, Spring 2005; Research Assistant Summer 2003, Fall 2003, Fall 2004, Summer 2005, Fall 2005, Spring 2006.
June-August 2006	U.S.G.S. National Earthquake Information Center, Golden, CO, USA. Summer Internship.
May-August 2004	Exxon Mobil Upstream Research Company, Houston TX, USA.
Summer Internship.	
Jan 2001-May 2001	Graduate Assistant, Geodynamics Research Group, PSU, USA.